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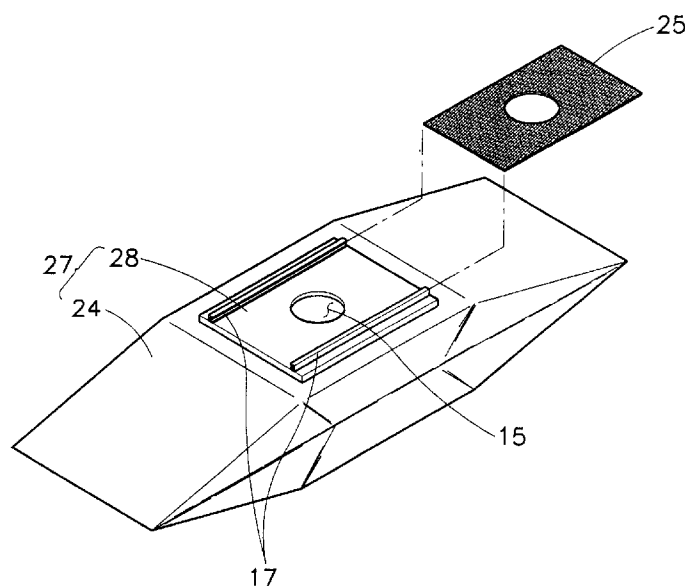
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(54) **Vacuum cleaner with an aromatic member**

(57) A vacuum cleaner (10) having an aromatic member (25) includes an air path which purifies air from the outside and the purified air is guided back to the outside. A dust envelope (24) and an exhausting filter (21) are mounted to the air path. The aromatic member (25)

is mounted to the dust envelope (24) or the exhausting filter (21). As a result, a fragrance with the purified air is discharged to the outside when the user uses the vacuum cleaner, thereby removing any bad smell in the discharged air and providing a sweet smell to the user.

FIG. 4



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## Description

The present invention relates to vacuum cleaners.

A known type of vacuum cleaner includes : a suction body having an intake hole for sucking dust from outside; a main body having a suction motor; and an intake hose for guiding the dust from the suction body to the main body.

Figure 1 is a perspective view illustrating a main body of a conventional vacuum cleaner; and Figure 2 is a rear view illustrating the conventional vacuum cleaner shown in Figure 1.

As shown in Figures 1 and 2, the main body of the conventional vacuum cleaner includes : a case 10 having a driving portion (not shown) and a dust collecting portion 11; a cover 12 which is hinge-coupled to one side of the case 10 in order to open/close the dust collecting portion 11; an intake hole 13 which is formed in front of the main body 10 in order to accommodate an intake hose 16; a dust envelope 20 mounted to the dust collecting portion 11 in order to collect the sucked dust; a coupling guide 14 which connects the dust envelope 20 to the dust collecting portion 11; a discharge grille 22 which is mounted to the back side of the main body 10 in order to discharge a purified air; and an exhausting filter 21 which is mounted to the inside of the discharge grille 22 in order to purify minute dust applied from the dust envelope 20. Also, the dust envelope 20 includes : a coupling plate 23 connected to the coupling guide 14; and a paper bag 24 connected to the coupling plate 23.

The aforementioned vacuum cleaner will be operated as follows.

If external air with dirt is drawn into the case 10 via the intake hole 13 by the suction operation of the driving portion (not shown), the dirt is collected in the dust envelope 20 of the dust collecting portion 11 while the air is purified further by the exhausting filter 21. Then, the purified air is discharged to the outside through the discharge grille 22.

At this time, minute dust discharged from the dust collecting portion 11 is filtered by the exhausting filter 21, but any contamination material floating in the air and/or a bad smell generated from a kitchen cannot be removed while using the vacuum cleaner. Accordingly, the conventional vacuum cleaner cannot satisfy the user's desire to maintain a pleasant surrounding when using the vacuum cleaner.

It is an objective of the present invention to provide a vacuum cleaner having an aromatic member which adds a sweet smell to discharged air from a vacuum cleaner, thereby maintaining a pleasant indoor space while using the vacuum cleaner.

To achieve the above objective, in a vacuum cleaner including a suction body having an intake hole for sucking dust from an external part, a main body having a dust envelope and an exhausting filter in order to collect and purify sucked dust, and an intake hose for guiding the dust from the suction body to the main body, the

vacuum cleaner mounts an aromatic member therein.

Here, the aromatic member is mounted to the dust envelope or the exhausting filter.

By way of example, specific embodiments of the invention will now be described, with reference to the accompanying drawings, in which :-

Figure 1 is a perspective view illustrating a main body of a conventional vacuum cleaner;

Figure 2 is a rear view illustrating a conventional vacuum cleaner shown in Figure 1;

Figure 3 is a perspective view illustrating a vacuum cleaner having an aromatic member in accordance with a first preferred embodiment of the present invention;

Figure 4 is a perspective view illustrating a dust envelope having an aromatic member in the vacuum cleaner in accordance with a first preferred embodiment of the present invention;

Figure 5 is a perspective view illustrating a vacuum cleaner having an aromatic member in accordance with a second preferred embodiment of the present invention; and

Figure 6 is a perspective view illustrating an exhausting filter having an aromatic member in a vacuum cleaner in accordance with a second preferred embodiment of the present invention.

The preferred embodiments of the present invention will now be described in detail with reference to the accompanying drawings.

Figure 3 is a perspective view illustrating a vacuum cleaner having an aromatic member in accordance with a first preferred embodiment of the present invention; and Figure 4 is a perspective view illustrating a dust envelope having an aromatic member in the vacuum cleaner in accordance with a first preferred embodiment of the present invention.

As shown in Figures 3 and 4, the vacuum cleaner in accordance with a preferred embodiment of the present invention includes a case 10, a cover 12, an intake hole 13, a dust envelope 27, a coupling guide 14, a rear discharge grille 22, and an exhausting filter 21. The dust envelope 27 has an aromatic member 25.

The dust envelope 27 includes : a coupling plate 28 which forms an opening portion 15 to the coupling guide 14 shown in figure 3; and a paper bag 24 coupled to the coupling plate 28. The aromatic member 25 for generating fragrance is attached to the coupling plate 28. Guide slits 17 are formed on both inner sides of the coupling guide 28, and the aromatic member 25 is easily inserted via the guide slits 17.

The aromatic member 25 may be detachably con-

nected to the coupling plate 28 via the guide slits 17, or may be fixedly attached to the coupling plate 28 during the manufacturing process.

Such a vacuum cleaner in accordance with a preferred embodiment of the present invention will operate as follows.

If a suction force is generated by a driving portion (not shown), external dirt is sucked with the air into the inside of the vacuum cleaner. After the air and dirt pass through the intake hole 13 of the main body 10, they are sucked into the dust collecting portion 11. The dirt which passes through the coupling plate 28 of the dust envelope 27, is collected in the paper bag 24. The air passes through the dust envelope 27, and is discharged to the outside via the discharge grille 22.

During such an air flow, the air receives fragrance from the aromatic member 25 attached to the coupling plate 28 while passing through the dust envelope 27, the air with the fragrance passes through the driving portion (not shown) and the exhausting filter 21 and is discharged to the outside. Accordingly, the discharge air does not have a bad smell due to contamination material. The air having a sweet smell is discharged to the outside.

If fragrance is not generated from the aromatic member 25 any more, the user should prepare a new dust envelope 27 where the aromatic member 25 cannot be separated from the coupling plate 28.

However, if the aromatic member 25 is detachably connected to the coupling plate 28, only the aromatic member 25 need be replaced with a new one. Accordingly, even if the user does not prepare a new dust envelope, only old aromatic member mounted in the old dust envelope can be replaced with other aromatic member having another fragrance.

The aromatic member 25 can be mounted to any place on the air flow path of the vacuum cleaner. The aromatic member 25 may be attached to the exhausting filter rather than the dust envelope, or the dust envelope and the exhausting filter may be soaked in an aromatic liquid so as to generate a self-fragrance. How to mount the aromatic member on the exhausting filter is shown in Figures 5 and 6.

Hereinafter, a vacuum cleaner having an aromatic member in accordance with another preferred embodiment of the present invention will now be described with reference to Figures 5 and 6.

As shown in Figures 5 and 6, if external air with dirt is entered in the case 10 because of a suction operation of the driving portion (not shown), the dirt is collected in the dust envelope 27 after passing through the intake hole 13 of the case 10. The air is purified again by the exhausting filter 29 mounted to the discharge grille 22 when passing through the driving portion (not shown). Fragrance is generated from aromatic members 26 attached to the exhausting filter 29 and is discharged to the outside, thereby providing a sweet smell to the user.

Briefly, a difference between the second preferred

embodiment and the conventional vacuum cleaner is that the aromatic members 26 are attached to the exhausting filter. Also, a difference between the first preferred embodiment and the second preferred embodiment is the position on which the aromatic member is attached, that is, the first preferred embodiment mounts the aromatic member to the dust envelope and the second preferred embodiment mounts the aromatic members to the exhausting filter.

In addition, the exhausting filter 29 includes at least one aromatic member 26, or may be soaked in an aromatic liquid in a manufacturing process so as to generate a self-fragrance. Also, such an aromatic member can be mounted to both the dust envelope and the exhausting filter.

As described above, the vacuum cleaner having an aromatic member according to the present invention sucks external dirt with the air, collects the dirt, and discharges a purified air. At this time, a fragrance generated from the aromatic member mounted to the exhausting filter or the dust envelope is discharged with the air, thereby providing a sweet smell to the user.

The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

## Claims

1. In a vacuum cleaner including a suction body having an intake hole for sucking dust from an external part, a main body which has a dust envelope in which guide slits are formed and an exhausting filter in order to collect and purify sucked dust, and an intake hose for guiding the dust from the suction

body to the main body, wherein the vacuum cleaner mounts an aromatic member therein.

2. The vacuum cleaner as set forth in the Claim 1, wherein the aromatic member is mounted to the dust envelope. 5
3. The vacuum cleaner as set forth in the Claim 2, wherein the aromatic member is detachably mounted to the dust envelope through the guide slits. 10
4. The vacuum cleaner as set forth in the Claim 1, wherein the aromatic member is mounted to the exhausting filter. 15
5. A vacuum cleaner having a guide path leading from an inlet for dusty air to an outlet for purified air, the vacuum cleaner having an aromatic member positioned in the guide path so that purified air leaving the vacuum cleaner is also provided with a pleasant smell. 20

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FIG. 1  
(PRIOR ART)

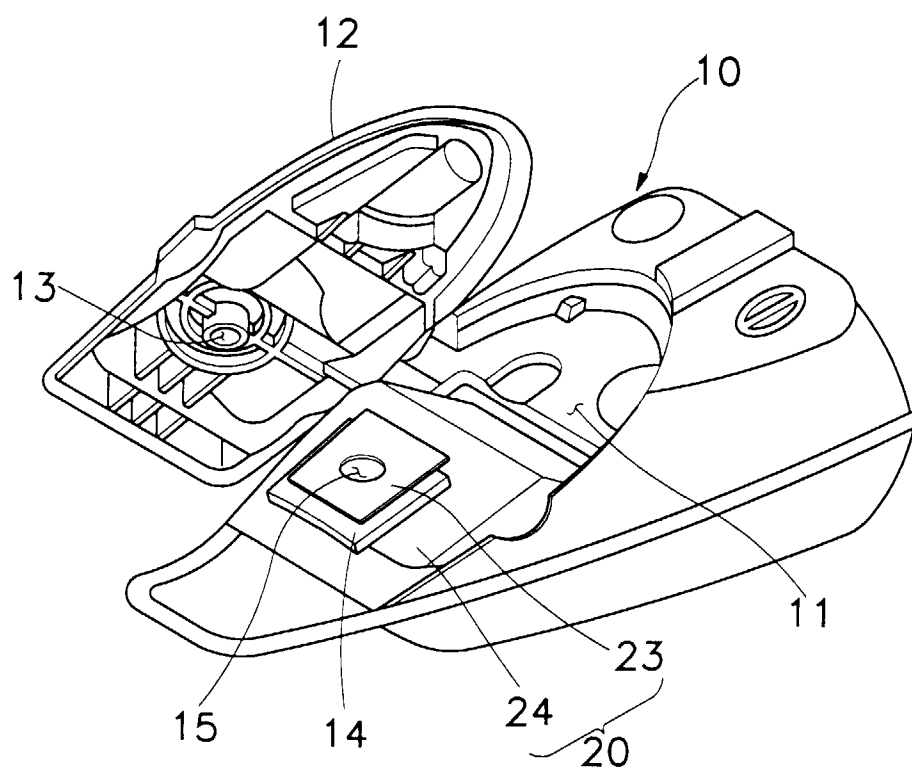


FIG. 2  
(PRIOR ART)

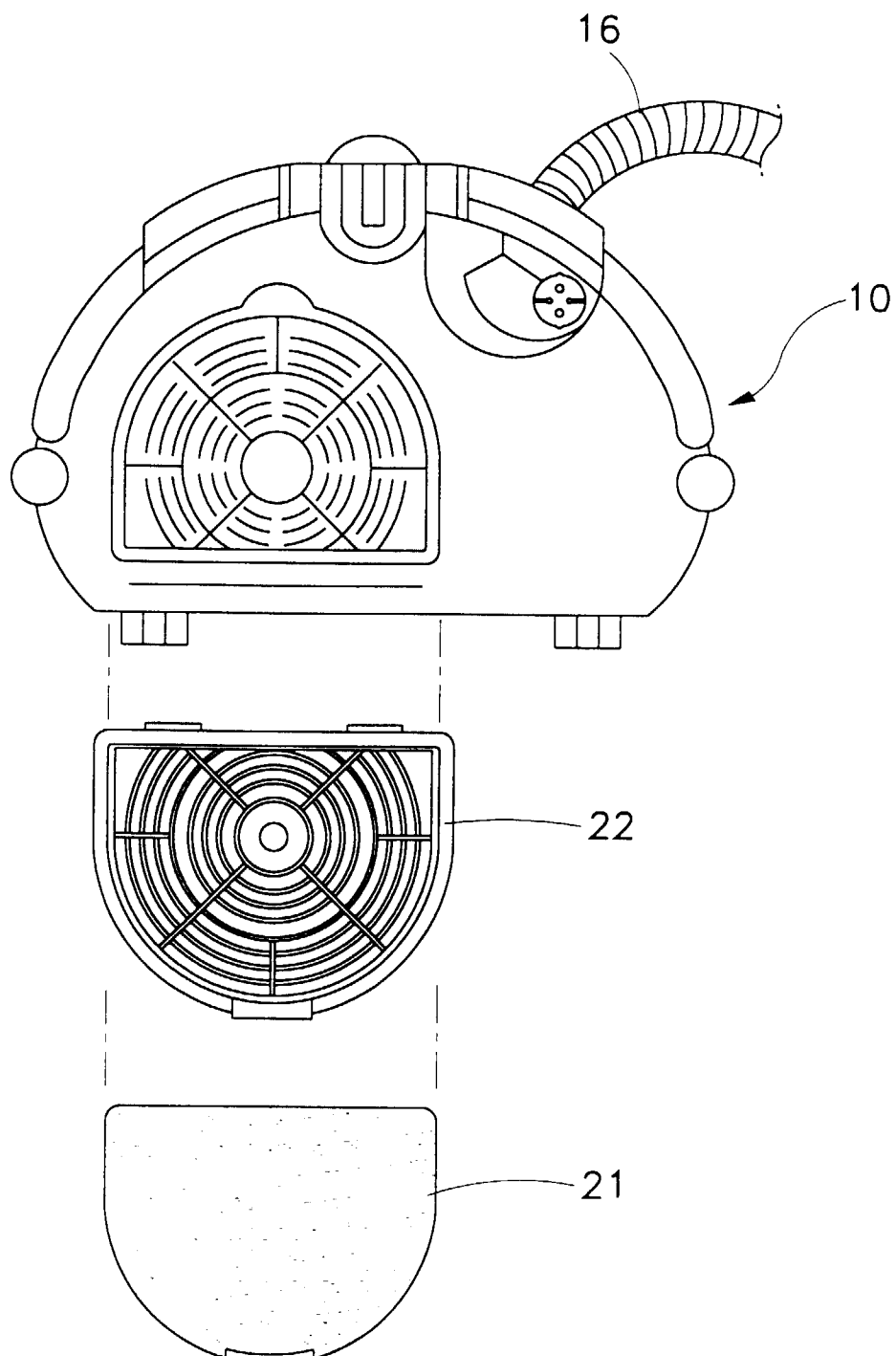


FIG. 3

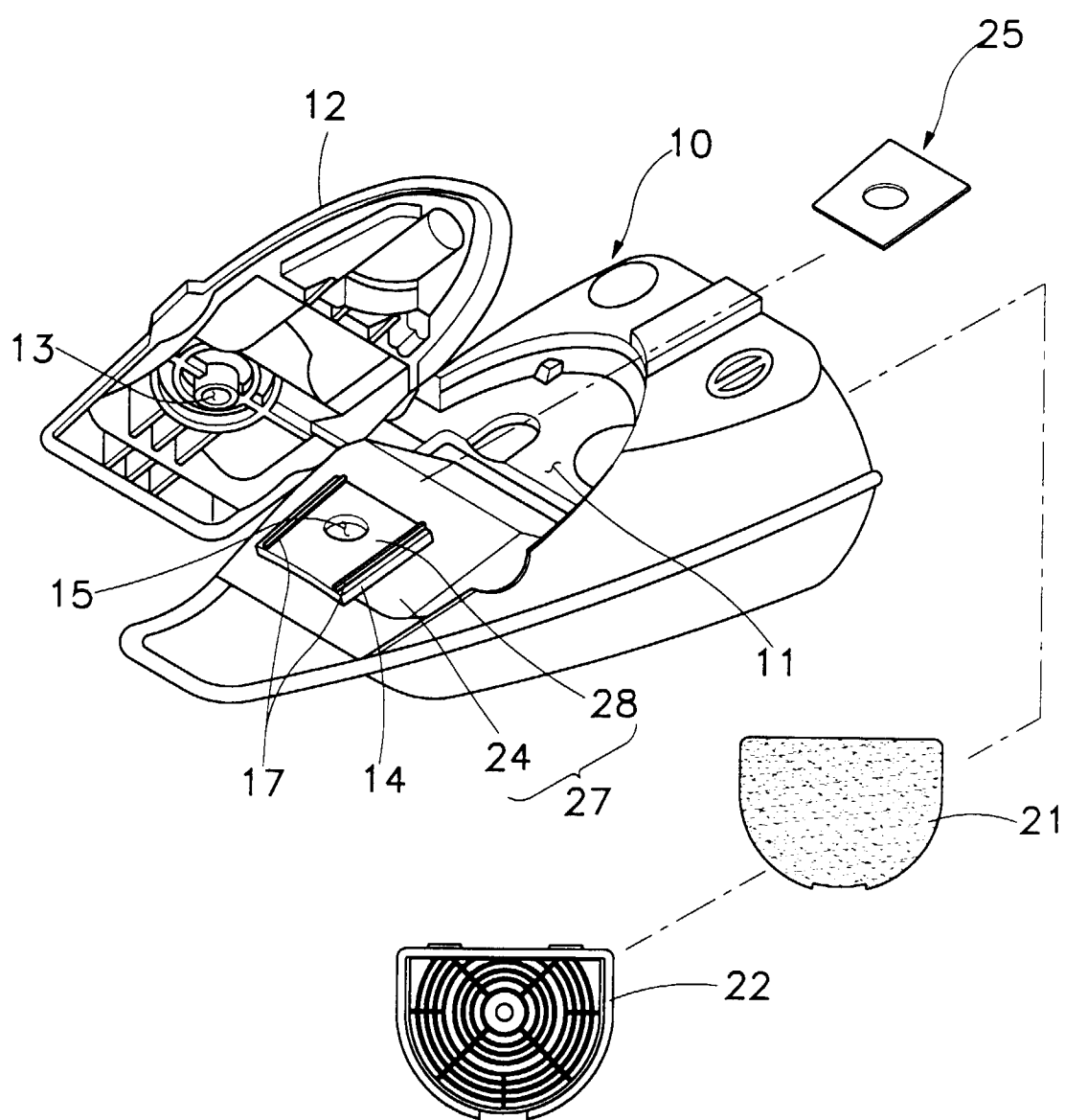


FIG. 4

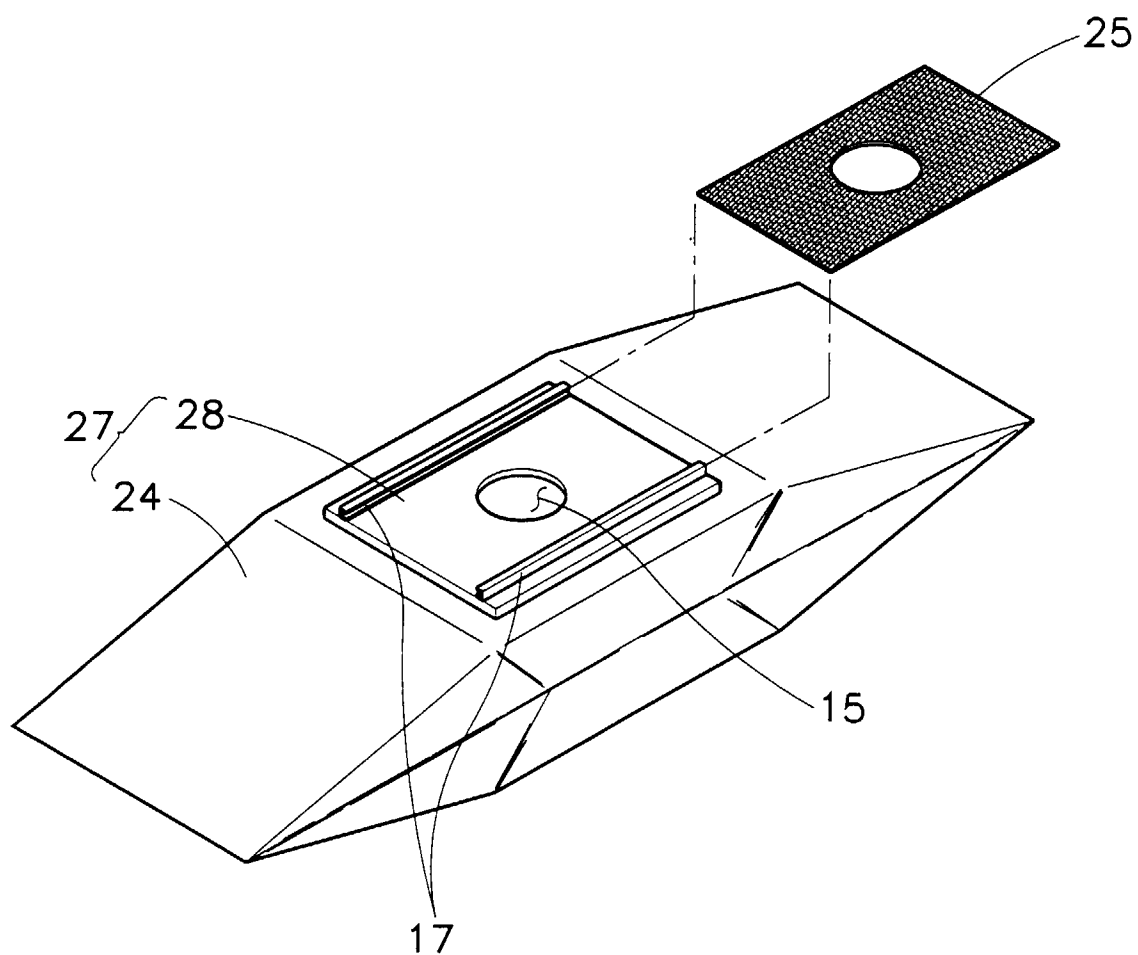




FIG. 5

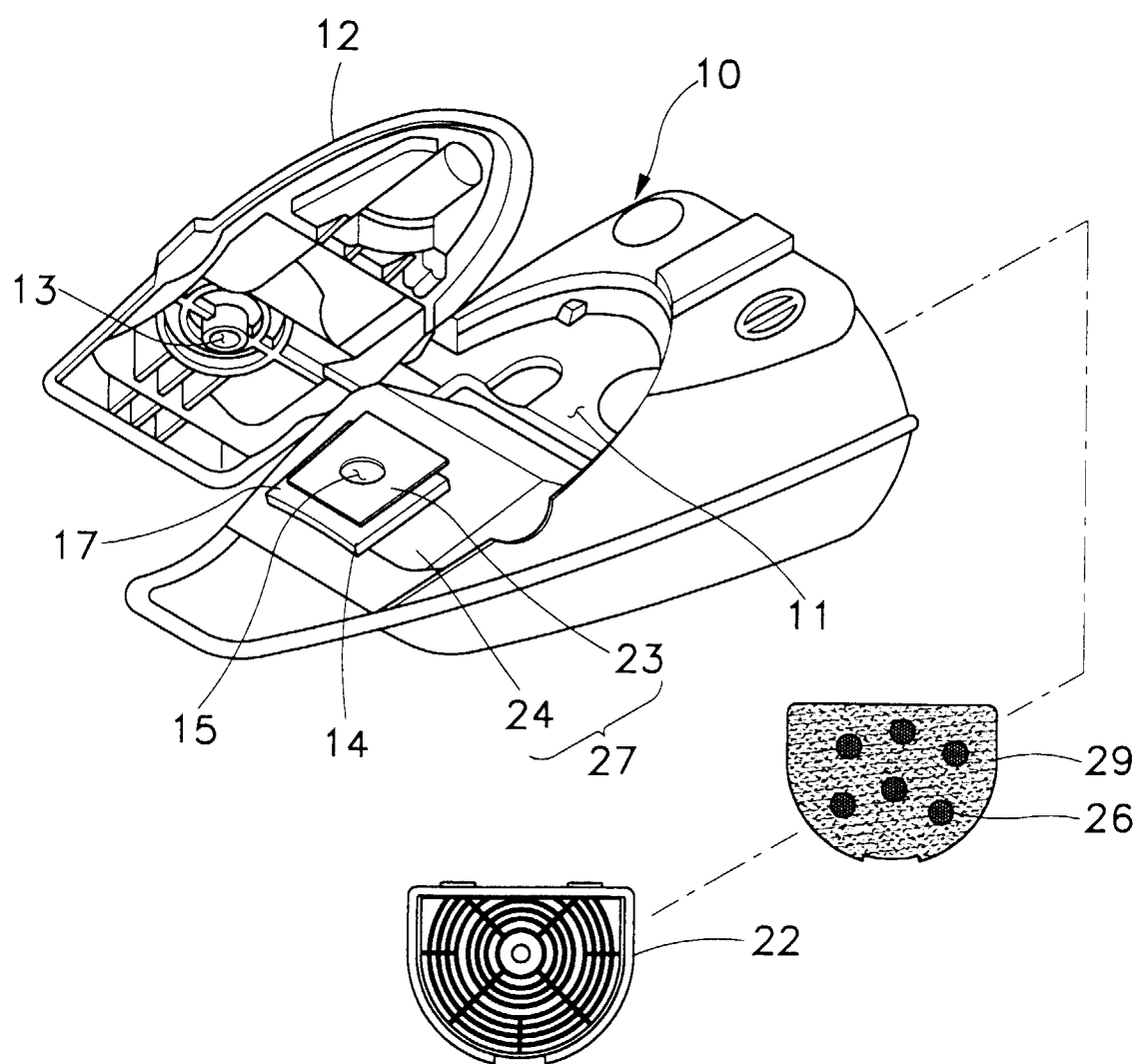
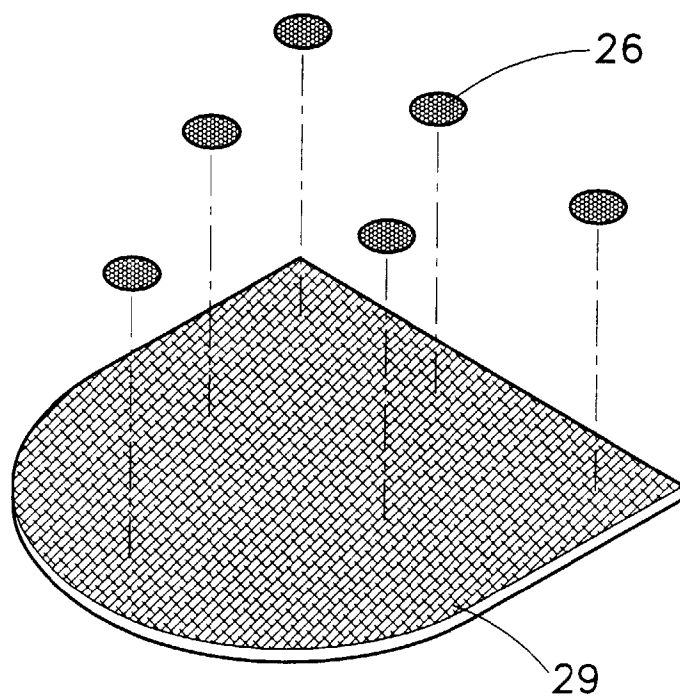


FIG. 6





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## EUROPEAN SEARCH REPORT

Application Number  
EP 98 30 0232

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Y	EP 0 362 624 A (LICENTIA GMBH) * column 5, line 35 - column 6, line 9; figures 10-12 *	1,2,4,5	A47L7/04
Y	US 5 342 420 A (BOSSES MARK D) * column 3, line 6 - column 4, line 39 *	1,2	
Y	US 3 274 758 A (PARMAN H. O. ) * column 2, line 1-54 *	1,2 3	
Y	DE 42 04 553 A (MIELE & CIE) * column 2, line 2 - column 3, line 27 *	1,4,5	
A	US 5 040 264 A (BRYANT ROY D) * column 3, line 17 - column 4, line 34; figures 1,2 *	1-3	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A47L
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 25 February 1998	Examiner Laue, F
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

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